

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-7 (canceled)

1 Claim 8 (currently amended): The computer-implemented
2 method of claim ~~[[7]]~~ 15 wherein the act of adjusting the
3 scores includes decreasing the scores.

Claims 9-11 (canceled)

1 Claim 12 (currently amended): The computer-implemented
2 method of claim ~~[[10]]~~ 15 wherein the performance
3 information includes ad selection information.

1 Claim 13 (currently amended): The computer-implemented
2 method of claim ~~[[10]]~~ 15 wherein the performance
3 information includes ad conversion information.

1 Claim 14 (currently amended): The computer-implemented
2 method of claim ~~[[10]]~~ 15 wherein the act of updating the
3 multiplier is performed using a function that causes the
4 updated multiplier to converge to observed user behavior
5 relevant to performance divided by predicted user behavior
6 relevant to performance.

1 Claim 15 (currently amended): A computer-implemented
2 method comprising:
3 a) accepting, by a computer system including at least
4 one computer, search query information including a
5 word;

6 b) determining, by the computer system, one or more
7 words related to the word included in the accepted
8 search query;
9 c) generating, by the computer system, an item
10 request including
11 i) the word included in the accepted search
12 query, and
13 ii) the one or more words determined to be
14 related to the word included in the accepted
15 search query;
16 d) retrieving, by the computer system, items using
17 the item request;
18 e) determining, by the computer system, a score for
19 each of the retrieved items;
20 f) adjusting, by the computer system, the scores of
21 any items retrieved on the basis of the one or more
22 words determined to be related to the word included in
23 the accepted search query relative to any items
24 retrieved on the basis of the word included in the
25 accepted search query to generate adjusted scores,
26 wherein the act of adjusting the scores includes
27 multiplying each of the scores by a multiplier that is
28 less than one;
29 g) serving, by the computer system, at least some of
30 the items to a client device for rendering to a user,
31 wherein the serving is controlled, at least in part,
32 using the adjusted scores; and
33 h) updating, by the computer system, the multiplier
34 using performance information,
35 wherein the retrieved items are advertisements,
36 wherein the act of determining a score for each

37 of the retrieved items uses at least one of ad performance
38 information and ad price information, and
39 ~~[[The computer-implemented method of claim 10]]~~ wherein the
40 act of updating the multiplier is performed using the
41 formula:

42
$$\text{updated_multiplier} = \frac{N \bullet \text{initial_multiplier} + \text{observed_user_behavior}}{N + \text{naively_predicted_user_behavior}}$$

43 wherein N is a number.

1 Claim 16 (previously presented): The computer-implemented
2 method of claim 15 wherein the user behavior is selection.

1 Claim 17 (previously presented): The computer-implemented
2 method of claim 15 wherein the user behavior is conversion.

Claims 18 and 19 (canceled)

1 Claim 20 (currently amended): The computer-implemented
2 method of claim ~~[[19]]~~ 27 wherein the act of adjusting the
3 scores includes decreasing the scores.

Claims 21-23 (canceled)

1 Claim 24 (currently amended): The computer-implemented
2 method of claim ~~[[22]]~~ 27 wherein the performance
3 information includes ad selection information.

1 Claim 25 (currently amended): The computer-implemented
2 method of claim ~~[[22]]~~ 27 wherein the performance
3 information includes ad conversion information.

1 Claim 26 (currently amended): The computer-implemented
2 method of claim [[22]] 27 wherein the act of updating the
3 multiplier is performed using a function that causes the
4 updated multiplier to converge to observed user behavior
5 relevant to performance divided by predicted user behavior
6 relevant to performance.

1 Claim 27 (currently amended): A computer-implemented
2 method comprising:
3 a) accepting, by a computer system including at least
4 one computer, search query information including a
5 word;
6 b) determining, by the computer system, one or more
7 words related to the word included in the accepted
8 search query;
9 c) generating, by the computer system, an item
10 request including
11 i) the word included in the accepted search
12 query, and
13 ii) the one or more words determined to be
14 related to the word included in the accepted
15 search query;
16 d) retrieving, by the computer system, items using
17 the item request;
18 e) determining, by the computer system, a score for
19 each of the retrieved items;
20 f) adjusting, by the computer system, the scores of
21 any items retrieved solely on the basis of the one or
22 more words determined to be related to the word
23 included in the accepted search query relative to any
24 items retrieved on the basis of the word included in
25 the accepted search query to generate adjusted scores,

26 wherein the act of adjusting the scores includes
 27 multiplying each of the scores by a multiplier that is
 28 less than one;
 29 g) serving, by the computer system, at least some of
 30 the items to a client device for rendering to a user,
 31 wherein the serving is controlled, at least in part,
 32 using the adjusted scores; and
 33 h) updating, by the computer system, the multiplier
 34 using performance information,
 35 wherein the retrieved items are advertisements,
 36 wherein the act of determining a score for each
 37 of the retrieved items uses at least one of ad performance
 38 information and ad price information, and
 39 ~~[[The computer implemented method of claim 22]]~~ wherein the
 40 act of updating the multiplier is performed using the
 41 formula:

$$42 \quad \text{updated_multiplier} = \frac{N \bullet \text{initial multiplier} + \text{observed_user_behavior}}{N + \text{predicted_user_behavior}}$$

43 wherein N is a number.

1 Claim 28 (previously presented): The computer-implemented
 2 method of claim 27 wherein the user behavior is selection.

1 Claim 29 (previously presented): The computer-implemented
 2 method of claim 27 wherein the user behavior is conversion.

Claims 30-32 (canceled)

1 Claim 33 (currently amended): The computer-implemented
 2 method of claim ~~[[32]]~~ 40 wherein the act of adjusting the
 3 score component includes decreasing the score component.

Claims 34-36 (canceled)

1 Claim 37 (currently amended): The computer-implemented
2 method of claim ~~[[35]]~~ 40 wherein the performance
3 information includes ad selection information.

1 Claim 38 (currently amended): The computer-implemented
2 method of claim ~~[[35]]~~ 40 wherein the performance
3 information includes ad conversion information.

1 Claim 39 (currently amended): The computer-implemented
2 method of claim ~~[[35]]~~ 40 wherein the act of updating the
3 multiplier is performed using a function that causes the
4 updated multiplier to converge to observed user behavior
5 relevant to performance divided by predicted user behavior
6 relevant to performance.

1 Claim 40 (currently amended): A computer-implemented
2 method comprising:
3 a) accepting, by a computer system having at least
4 one computer, search query information including a
5 word;
6 b) determining, by the computer system, one or more
7 words related to the word included in the accepted
8 search query;
9 c) generating, by the computer system, an item
10 request including
11 i) the word included in the accepted search
12 query, and
13 ii) the one or more words determined to be
14 related to the word included in the accepted
15 search query;

16 d) retrieving, by the computer system, items using
 17 the item request;
 18 e) determining, by the computer system, a score for
 19 each of the retrieved items, wherein a score component
 20 is adjusted for any items retrieved on the basis of
 21 the one or more words determined to be related to the
 22 word included in the accepted search query relative to
 23 any items retrieved on the basis of the word included
 24 in the accepted search query, wherein the act of
 25 adjusting the score component includes multiplying the
 26 score component by a multiplier that is less than one;
 27 f) transmitting, by the computer system, at least
 28 some of the retrieved items towards a client device
 29 for rendering to a user; and
 30 g) updating, by the computer system, the multiplier
 31 using performance information,
 32 wherein the retrieved items are advertisements,
 33 wherein the score component is at least one of ad
 34 performance information and ad price information, and
 35 [[The computer-implemented method of claim 35]] wherein the
 36 act of updating the multiplier is performed using the
 37 formula:

$$\text{updated_multiplier} = \frac{N \bullet \text{initial_multiplier} + \text{observed_user_behavior}}{N + \text{naively_predicted_user_behavior}}$$

39 wherein N is a number.

1 Claim 41 (previously presented): The computer-implemented
 2 method of claim 40 wherein the user behavior is selection.

1 Claim 42 (previously presented): The computer-implemented
 2 method of claim 40 wherein the user behavior is conversion.

Claims 43-55 (canceled)

1 Claim 56 (currently amended): The apparatus of claim
2 [[54]] 59 wherein the performance information includes ad
3 selection information.

1 Claim 57 (currently amended): The apparatus of claim
2 [[54]] 59 wherein the performance information includes ad
3 conversion information.

1 Claim 58 (currently amended): The apparatus of claim
2 [[54]] 59 wherein the act of updating the multiplier uses a
3 function that causes the updated multiplier to converge to
4 observed user behavior relevant to performance divided by
5 predicted user behavior relevant to performance.

1 Claim 59 (previously presented): Apparatus comprising:
2 a) an input for accepting search query information
3 including a word;
4 b) at least one processor; and
5 c) at least one storage device storing machine
6 executable instructions which, when executed by the at
7 least one processor, perform a method including,
8 1) determining one or more words related to the
9 word included in the accepted search query,
10 2) generating an item request including
11 i) the word included in the accepted search
12 query, and
13 ii) the one or more words determined to be
14 related to the word included in the accepted
15 search query,
16 3) retrieving items using the item request,

17 4) determining a score for each of the retrieved
 18 items,
 19 5) adjusting the scores of any items retrieved on
 20 the basis of the one or more words determined to
 21 be related to the word included in the accepted
 22 search query relative to any items retrieved on
 23 the basis of the word included in the accepted
 24 search query to generate adjusted scores wherein
 25 the act of adjusting uses a multiplier,
 26 6) serving at least some of the items to a client
 27 device for rendering to a user, wherein the
 28 serving is controlled, at least in part, using
 29 the adjusted scores, and
 30 7) updating the multiplier using performance
 31 information,
 32 wherein the retrieved items are advertisements,
 33 wherein the means for determining a score for
 34 each of the retrieved items use at least one of ad
 35 performance information and ad price information, and
 36 [[The apparatus of claim 54]] wherein the act of updating
 37 the multiplier uses the formula:
 38
$$\text{updated_multiplier} = \frac{N \bullet \text{initial_multiplier} + \text{observed_user_behavior}}{N + \text{naively_predicted_user_behavior}}$$

 39 wherein N is a number.

1 Claim 60 (original): The apparatus of claim 59 wherein the
 2 user behavior is selection.

1 Claim 61 (original): The apparatus of claim 59 wherein the
 2 user behavior is conversion.

Claims 62-65 (canceled)

1 Claim 66 (currently amended): The apparatus of claim [[64]]
2 69 wherein the performance information includes ad
3 selection information.

1 Claim 67 (currently amended): The apparatus of claim [[64]]
2 69 wherein the performance information includes ad
3 conversion information.

1 Claim 68 (currently amended): The apparatus of claim
2 [[64]] 69 wherein the act of updating the multiplier uses a
3 function that causes the updated multiplier to converge to
4 observed user behavior relevant to performance divided by
5 predicted user behavior relevant to performance.

1 Claim 69 (currently amended): Apparatus comprising:
2 a) an input for accepting search query information
3 including a word;
4 b) at least one processor; and
5 c) at least one storage device storing machine
6 executable instructions which, when executed by the at
7 least one processor, perform a method including,
8 1) determining one or more words related to the
9 word included in the accepted search query,
10 2) generating an item request including
11 i) the word included in the accepted search
12 query, and
13 ii) the one or more words determined to be
14 related to the word included in the accepted
15 search query,
16 3) retrieving items using the item request,

17 4) determining a score for each of the retrieved
 18 items,
 19 5) adjusting the scores of any items retrieved
 20 solely on the basis of the one or more words
 21 determined to be related to the word included in
 22 the accepted search query relative to any items
 23 retrieved on the basis of the word included in
 24 the accepted search query to generate adjusted
 25 scores, wherein the act of adjusting uses a
 26 multiplier,
 27 6) serving at least some of the items to a client
 28 device for rendering to a user, wherein the
 29 serving is controlled, at least in part, using
 30 the adjusted scores, and
 31 7) updating the multiplier using performance
 32 information,
 33 wherein the retrieved items are advertisements,
 34 wherein the means for determining a score for
 35 each of the retrieved items uses at least one of a
 36 performance information and ad price information, and
 37 [[The apparatus of claim 64]] wherein the act of updating
 38 the multiplier uses the formula:
 39
$$\text{updated_multiplier} = \frac{N \bullet \text{initial_multiplier} + \text{observed_user_behavior}}{N + \text{predicted_user_behavior}}$$

 40 wherein N is a number.

1 Claim 70 (original): The apparatus of claim 69 wherein the
 2 user behavior is selection.

1 Claim 71 (original): The apparatus of claim 69 wherein the
 2 user behavior is conversion.

Claims 72-76 (canceled)

1 Claim 77 (currently amended): The apparatus of claim
2 ~~[[75]]~~ 80 wherein the performance information includes ad
3 selection information.

1 Claim 78 (currently amended): The apparatus of claim
2 ~~[[75]]~~ 80 wherein the performance information includes ad
3 conversion information.

1 Claim 79 (currently amended): The apparatus of claim
2 ~~[[75]]~~ 80 wherein the act of updating the multiplier uses a
3 function that causes the updated multiplier to converge to
4 observed user behavior relevant to performance divided by
5 predicted user behavior relevant to performance.

1 Claim 80 (currently amended): Apparatus comprising:
2 a) an input for accepting search query information
3 including a word;
4 b) at least one processor; and
5 c) at least one storage device storing machine
6 executable instructions which, when executed by the at
7 least one processor, perform a method including,
8 1) determining one or more words related to the
9 word included in the accepted search query,
10 2) generating an item request including
11 i) the word included in the accepted search
12 query, and
13 ii) the one or more words determined to be
14 related to the word included in the accepted
15 search query,
16 3) retrieving items using the item request,

17 4) determining a score for each of the retrieved
18 items, wherein a score component is adjusted for
19 any items retrieved on the basis of the one or
20 more words determined to be related to the word
21 included in the accepted search query relative to
22 any items retrieved on the basis of the word
23 included in the accepted search query, wherein
24 the score component is adjusted using a
25 multiplier,
26 5) transmitting at least some of the retrieved
27 items towards a client device for rendering to a
28 user, and
29 6) updating the multiplier using performance
30 information,
31 wherein the retrieved items are advertisements,
32 wherein the score component is at least one of ad
33 performance information and ad price information, and
34 [[The apparatus of claim 75]] wherein the act of updating
35 the multiplier uses the formula:

36
$$\text{updated_multiplier} = \frac{N \bullet \text{initial_multiplier} + \text{observed_user_behavior}}{N + \text{naively_predicted_user_behavior}}$$

37 wherein N is a number.

1 Claim 81 (original): The apparatus of claim 80 wherein the
2 user behavior is selection.

1 Claim 82 (original): The apparatus of claim 80 wherein the
2 user behavior is conversion.

Claims 83 and 84 (canceled)

1 Claim 85 (currently amended): The method of claim 15
2 wherein the act of retrieving ads using the ad request
3 retrieves ads relevant to any one of the words of the
4 generated ad request.

Claim 86 (canceled)